The following claims are presented for examination:

**1.** (currently amended) ~~**Process**~~ **A method** for the production of nanoparticles, mixtures of nanoparticles, nanoscale solutions, as well as supersaturated solutions in general, ~~**especially also such multi-element combination as well as multi-component-mineral substance and multi-component- trace element preparations, as characterized by the following steps**~~ **said method comprising**:

a) **providing** the presence of a ~~**mineral or trace element containing**~~ suspension, which contains:

i) at least 1 ~~**alkaline earth or alkali element**~~ **element from the group consisting of alkali and alkaline earth elements,** in a concentration range which contains between **[[1,0]] 1.0** and 50 weight %, ~~**preferably between 2,0 and 25 weight%,**~~ which is at least up to 50 weight% present in ~~**a mineral and/or**~~ **at least one of a mineral form and** ionically not easily soluble form ~~**,**~~ and

ii) at least 1 element from **[[the]] one of the:**

- A Group of the elements, comprising silicon, iron, aluminum, manganese, chrome, boron, titanium, nickel, copper, zinc, vanadium, molybdenum and cobalt, ~~**or from the**~~
- B Group of the elements, comprising selenium, zircon, rubidium, lithium, yttrium, cerium, palladium, lanthanum, neodymiumium, silver, wolfram, gallium, tellurium, thorium, praseodymium, niobium, samarium, gadolinium, dysprosium, arsenic, scandium, indium, antimony, cesium, germanium and ytterbium, **and** ~~**from the**~~
- C Group of the elements comprising erbium, europium, bismuth, platinum, tantalum, terbium, holmium, rubidium, beryllium, gold and rhodium ~~**,**~~

iii) in a molar ratio referred to the sum of the alkali and alkaline earth elements between **[[0,1%]] 0.1%** and 30% ~~**, preferably between 0, 3% and 10%, and**~~ ~~**;**~~

b) ~~**the introduction of**~~ **introducing** particle dismembering or dispersing energy in the suspension by retention of a dispersed concentrate ~~**;**~~ and

c) mixing **[[of]]** the dispersed concentrate with acid.

**2.** (currently amended) ~~**Process**~~ **A method** according to claim 1,

characterized in that at least 2 alkaline earth elements are contained in a concentration range contain between **[[1,0]]** **1.0** and 50 weight % ~~**, preferably between 3,0 and 35 weight.%**~~.

**3.** (currently amended) ~~**Process**~~ **A method** according to ~~**the aforementioned claims**~~ **claim 1**,

characterized in that at least one alkaline earth component is present as ~~**oxide and/or hydroxide and/or carbonate and/or hydrogen carbonate**~~ **at least one of oxide, hydroxide, carbonate, and hydrogen carbonate**.

**4.** (currently amended) ~~**Process**~~ **A method** according to ~~**one of the aforementioned claims**~~ **claim 1**,

characterized in that the suspension contains at least 4 elements from the A Group of the elements, in a molar ratio, each referred to the sum of the alkali and alkaline earth elements between **[[0,1%]]** **0.1%** and 30% ~~**, preferably between 0, 3% and 10%**~~.

**5.** (currently amended) ~~**Process**~~ **A method** according to ~~**one of the aforementioned claims**~~ **claim 1**,

characterized in that the suspension contains at least 4 elements from the B Group of the elements in a molar ratio, each referred to the sum of the elements from the A Group, between **[[0,05%]]** **0.05%** and 30% ~~**, preferably between 0,1% and 5%**~~.

**6.** (currently amended) ~~**Process**~~ **A method** according to ~~**one of the aforementioned claims**~~ **claim 1**,

characterized in that the suspension contains at least 4 elements from the C Group of the ~~**elments**~~ **elements** in a molar ratio, each referred to the sum of the elements from the B Group, between **[[0,05%]]** **0.05%** and 30% ~~**, preferably between 0,1% and 5%**~~.

**7.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that **[[the]]** **a** mineral substance matrix substantially consists of ash of ~~**plant and/or animal origin**~~ **at least one of plant origin and animal origin**.

**8.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 7**,

characterized in that the ash is produced ~~**in a thermally oxidizing manner and/or by a plasma process and/or by reaction of organic raw substances with activated oxygen species**~~ **in accordance with at least one of: i) a thermally-oxidizing manner, ii) a plasma process, and iii) reaction of organic raw substances with activated oxygen species**.

**9.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 8**,

characterized in that as ~~**raw material**~~ **said organic raw substances, at least one of** wood, nut shells, fruit stones, fruit skins, ~~**in particular orange peel, lemon peel,**~~ potato skins, olive stones, pine cones, roots, wheat husks, **and** rice husks ~~**, as well as mixtures, extracts or press cakes of those**~~ are used.

**10.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that ~~**plant press cakes and/or extraction residues , in particular of sunflower seeds, nuts, thistle, rape seed, sesame, rosehip, olives, poppy, apricot stones, pumpkin seeds, oranges, lemons, potato skins, roots, wheat brans, rice husks, aloe vera and ginseng**~~ **at least one of press cakes and extraction residues** are used as resultant products.

**11.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 7**,

characterized in that components or minerals from the group of the iodine, bromine, fluoride salts and selenium combinations are added to the ash.

**12.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that the suspension is ground or dispersed at a pH > 7 ~~**, preferably > 10 and especially preferably > 11**~~.

**13.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that oxidizing species ~~**such as hydrogen peroxide, ozone, singlet oxygen or atomic oxygen**~~ are added to the suspension.

**14.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that of the distributing or dispersion process is carried out with the help of **one of** a ball mill, bead mill, colloidal mill, centrifugal mill ~~**or with a**~~ **and** high pressure jet.

**15.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that in the dispersion process **,** energies are introduced, referred to the tonne solids **, of** between 100 and ~~**100.000**~~ **100,000** kwh ~~**, preferably between 500 and 5.000 kwh**~~.

**16.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that of the medium diameter of the primary grinding bodies lies between 0.05 and 2 mm.

**17.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that the ground up suspension is classified by means of ~~**at least one centrifuge or at least of one membrane or at least one sieve**~~ **one of the following: at least one centrifuge, at least one membrane, and at least one sieve**.

**18.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that the acid is added in the form of ~~**one or several foodstuff materials**~~ **at least one foodstuff material from the group** comprising citric acid, malic acid and other fruit acids, as well as ascorbic acid, lactic acid, fruit juices, phosphorous acid, saline acid as well as mixtures of the same.

**19.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that the disperse concentrate is temporarily stored and is not mixed with the acid until shortly ~~**or immediately**~~ before use.

**20.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that bio-organisms are added to the solution for stabilisation

**21.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that as bio-organisms stabilizing the nanoparticles bacteria ~~**such as lactic acid bacteria, combucha, effective micro-organisms, yoghurt bacteria, yeasts, fungae**~~ are used.

**22.** (currently amended) ~~**Process**~~ **A method** according to ~~**at least one of the aforementioned claims**~~ **claim 1**,

characterized in that the suspension containing nanoparticles is stabilized chemically by the addition of coordinating / absorbing substances ~~**like e.g. gelatin, agar, xanthan, carob seed powder, pectin, vegetable juices**~~.

**23.** (currently amended) ~~**Process**~~ **A method** for the production of an easily pulverizable dry substance of a nanoscale or supersaturated solution of mineral substances and trace elements ~~**corresponding to claims 1 to 22**~~, **said method comprising:**

**a) providing the presence of a suspension that contains:**

**i) at least 1 element from the group consisting of alkali and alkaline earth elements, in a concentration range which contains between 1.0 and 50 weight %, which is at least up to 50 weight% present in at least one of a mineral form and ionically not easily soluble form, and**

**ii) at least 1 element from one of the:**

**- A Group of the elements, comprising silicon, iron, aluminum, manganese, chrome, boron, titanium, nickel, copper, zinc, vanadium, molybdenum and cobalt,**

**- B Group of the elements, comprising selenium, zircon, rubidium, lithium, yttrium, cerium, palladium, lanthanum, neodymiumium, silver, wolfram, gallium, tellurium, thorium, praseodymium, niobium, samarium, gadolinium, dysprosium, arsenic, scandium, indium, antimony, cesium, germanium and ytterbium, and**

**- C Group of the elements comprising erbium, europium, bismuth, platinum, tantalum, terbium, holmium, rubidium, beryllium, gold and rhodium,**

**iii) in a molar ratio referred to the sum of the alkali and alkaline earth elements between 0.1% and 30%;**

**b) introducing particle dismembering or dispersing energy in the suspension by retention of a dispersed concentrate; and**

**c) mixing the dispersed concentrate with acid;**

**wherein** ~~**characterized in that**~~ the nanoscale solution is converted with the help of a suitable drying process ~~**, preferably by spray freeze drying**~~.

**24.** (currently amended) ~~**Process according to the aforementioned claim**~~ **A method according to claim 23**,

characterized in that the dry substance easily dispersable at nanoscale is processed into ~~**a granulate or into tablets and/or capsules**~~ **at least one of a granulate, tablets, and capsules**.

**25.** (currently amended) ~~**Process according to at least one of the aforementioned claims**~~ **A method according to claim 23**,

characterized in that the easily dispersable dry substance is mixed with crystaline acid ~~**, for example citric acid and/or malic acid,**~~ and is optionally **[[be]]** processed into ~~**tablets, granulate or into capsules**~~ **one of tablets, granulate, and capsules**.

**26.** (currently amended) A device for the production or for the activation of mineral substance preparations ~~**corresponding to the process claims 1 to 22, characterized in that this contains**~~ **comprising** at least two segments locally being separated by a seal, ~~**whereby one segment**~~ **wherein a first segment of said at least two segments** contains substantially disperse concentrate and ~~**the second segment**~~ **a second segment of said at least two segments** contains acid, and ~~**whereby**~~ **wherein** the seal **[[may]] is**

**able to** be opened by definite pressure on at least one of ~~**the two segments**~~ **said first segment and said second segment**, whereby the contents of both segments come into contact with each other.

**27.** (currently amended) ~~**Nanoscale and/or supersaturated solutions**~~ **A solution** of mineral substance or trace elements ~~**, produceable according to claims 1 to 24, characterized in that**~~ **said solution comprising:**

a) ~~**these contain**~~ at least 1 chemical element ~~**comprising from the**~~ **from one of the:**

- *A-Group* of the elements, **[[again]]** comprising silicon, iron, aluminum, manganese, chrome, boron, titanium, nickel, copper, zinc, vanadium, molybdenum and cobalt, ~~**or from the**~~

- *B-Group* of the elements, **[[again]]** comprising selenium, zircon, rubidium, lithium, yttrium, cerium, palladium, lanthan, neodymium, silver, wolfram, gallium, tellurium, thorium, praseodym, niobium, samarium, gadolinium, dysprosium, arsenic, scandium, indium, antimony, cesium, germanium and ytterbium, ~~**or from the**~~ **and**

- *C Group* of the elements **[[again]]** comprising erbium, europium, bismuth, platinum, tantalum, terbium, holmium, rubidium, beryllium, gold **,**

which **said at least 1 chemical element:**

i) forms ~~**one or several crystals or agglomerates or amorphous structures**~~ **at least one of crystals, agglomerates, and amorphous structures**, or is embedded into such,

ii) which in a respective solution at room temperature within one hour **[[have]]** **has** a growth in size in particle diameter between ~~**0,1nm and 10 µm,**~~ **0.1 nm and 10 µm; and**

b) **surrounding material;**

~~**whereby this**~~ **wherein said** at least 1 chemical element is embedded **in said surrounding material** to a maximum of 20 weight % in particles greater than 100 nm.

**28.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to the aforementioned claim**~~ **A solution according to claim 27**,

characterized in that **:**

a) ~~these contain~~ **said solution comprises** at least 2 chemical elements ~~, comprising from the~~ **from at least one of:**

- **said** A Group of the elements ~~and/ or from the~~ **,**
- **said** B Group of the elements ~~and/ or from the~~ **, and**
- **said** C Group of the elements,
  - i) ~~whereby these form crystals, agglomerates or amorphous structures~~ **wherein said at least 2 chemical elements form at least one of crystals, agglomerates, and amorphous structures,** or are embedded into such,
  - ii) which in a respective solution at room temperature within one hour have a growth in particle diameter between **[[0,1nm]] 0.1 nm** and 10 µm, and

b) **[[these]] said** at least 2 chemical elements are embedded **in said surrounding material** to a maximum of 20 weight % in particles greater than 100 nm.

**29.** (currently amended) ~~Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to the aforementioned claim~~ **A solution according to claim 28**,

characterized in that

a) ~~these contain~~ **said solution comprises** at least 4 chemical elements ~~, comprising from the~~ **from at least one of:**

- **said** A Group of the elements ~~and/ or from the~~ **,**
- **said** B Group of the elements ~~and/ or from the~~ **, and**
- **said** C Group of the elements,
  - i) ~~whereby these form crystals, agglomerates or amorphous structures~~ **wherein said at least 4 chemical elements form at least one of crystals, agglomerates, and amorphous structures,** or are embedded into such,
  - ii) which in a respective solution at room temperature within one hour have a growth in particle diameter between **[[0,1nm]] 0.1 nm** and 10 µm, and

b) **[[these]] said** at least 4 chemical elements are embedded **in said surrounding material** to a maximum of 20 weight % in particles greater than 100 nm.

**30.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to the aforementioned claim**~~ **A solution according to claim 29**,

characterized in that

a) ~~**these contain**~~ **said solution comprises** at least 6 chemical elements ~~**,**~~ ~~**comprising from the**~~ **from at least one of:**

- **said** A Group of the elements ~~**and/ or from the ,**~~
- **said** B Group of the elements ~~**and/ or from the**~~ **, and**
- **said** C Group of the elements,
  - i) ~~**whereby these form crystals, agglomerates or amorphous structures**~~ **wherein said at least 6 chemical elements form at least one of crystals, agglomerates, and amorphous structures,** or are embedded into such,
  - ii) which in a respective solution at room temperature within one hour have a growth in particle diameter between **[[0,1nm]] 0.1 nm** and 10 µm, and

b) **[[these]] said** at least 6 chemical elements are embedded **in said surrounding material** to a maximum of 20 weight % in particles greater than 100 nm.

**31.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to the aforementioned claim**~~ **A solution according to claim 30**,

a) ~~**these contain**~~ **said solution comprises** at least 8 chemical elements ~~**,**~~ ~~**comprising from the**~~ **from at least one of:**

- **said** A Group of the elements ~~**and/ or from the ,**~~
- **said** B Group of the elements ~~**and/ or from the**~~ **, and**
- **said** C Group of the elements,
  - i) ~~**whereby these form crystals, agglomerates or amorphous structures**~~ **wherein said at least 8 chemical elements form at least one of crystals, agglomerates, and amorphous structures,** or are embedded into such,
  - ii) which in a respective solution at room temperature within one hour have a growth in particle diameter between **[[0,1nm]] 0.1 nm** and 10 µm, and

b) **[[these]] said** at least 8 chemical elements are embedded **in said surrounding material** to a maximum of 20 weight % in particles greater than 100 nm.

**32.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 31**,

characterized in that the particle growth speed is between 1 nm and 1 µm per hour.

**33.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 31**,

characterized in that at least 2 of the at least **[[5]] 8** elements are present in the concentration range between 30 g/l and 10 mg/l ~~**, preferably between 15 g/l and 10 µg/l**~~.

**34.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 31**,

characterized in that at least 4 of the at least 8 elements are present in a concentration range between 30 g/l and 10 mg/l ~~**, preferably between 15 g/l and 10 µg/l**~~.

**35.** (canceled)

**36.** (currently amended) N~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 31**,

characterized in that at least 4 of the at least 8 elements are embedded **in said surrounding material** to maximum 20 weight.% in particles greater 80 nm.

**37.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 31**,

characterized in that at least 4 of the at least 8 elements stem from the group comprising gold, silver, platinum, bismuth, copper, palladium, iron, **and** wolfram.

**38.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 27**,

characterized in that the metallic or metalloid or cationic species contained therein is ~~**subtantially**~~ **substantially** obtained from the incineration of ~~**plant or animal raw materials**~~ **one of plant raw materials and animal raw materials**.

**39.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 27**,

characterized in that at least 60% of all mineral species are smaller that 100 nm.

**40.** (currently amended) ~~**Nanoscale and/or supersaturated solutions of mineral substances or trace elements, according to at least one of the aforementioned claims**~~ **A solution according to claim 27**,

characterized in that at least 80% of all mineral species are smaller that 100 nm.

**41.** (canceled)

**42.** (currently amended) ~~**Process**~~ **A method** for the production of nanoscale emulsions ~~**corresponding to claims 1 to 23**~~, **said method comprising:**

**a) providing the presence of a suspension that contains:**

**i) at least element from the group consisting of alkali and alkaline earth elements, in a concentration range which contains between 1.0 and 50 weight %, which is at least up to 50 weight% present in at least one of a mineral form and ionically not easily soluble form, and**

**ii) at least 1 element from one of the following groups of elements:**

**- A Group of the elements, comprising silicon, iron, aluminum, manganese, chrome, boron, titanium, nickel, copper, zinc, vanadium, molybdenum and cobalt,**

**- B Group of the elements, comprising selenium, zircon, rubidium, lithium, yttrium, cerium, palladium, lanthanum, neodymiumium, silver, wolfram, gallium, tellurium, thorium, praseodymium,**

**niobium, samarium, gadolinium, dysprosium, arsenic, scandium, indium, antimony, cesium, germanium and ytterbium, and**

**- C Group of the elements comprising erbium, europium, bismuth, platinum, tantalum, terbium, holmium, rubidium, beryllium, gold and rhodium**

**iii) in a molar ratio referred to the sum of the alkali and alkaline earth elements between 0.1% and 30%;**

**b) introducing particle dismembering or dispersing energy in the suspension by retention of a dispersed concentrate; and**

**c) mixing the dispersed concentrate with acid;**

**wherein** ~~**characterized in that**~~ the mineral substances of the disperse phase are introduced in supersaturated form into an oil.

**43.** (currently amended) ~~**Process for the production of nanoscale emulsions corresponding to the aforementioned claim**~~ **A method according to claim 42**,

characterized in that the mineral substance-rich solution is introduced into the oil phase by means of **one of the following:** a rotor/stator system, a membrane process, an ultrasound process, a premix process **[[or]] , and** a high pressure-jet process at a jet speed of between 30 m/s and 500 m/s.